S1922/S1922a and S2022a LCD Monitor
User Guide

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About This Guide

This guide provides information on setting up the monitor, installing drivers, using the on-screen display menu, troubleshooting and technical specifications.

⚠ **WARNING!** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

⚠ **CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner provides important supplemental information.

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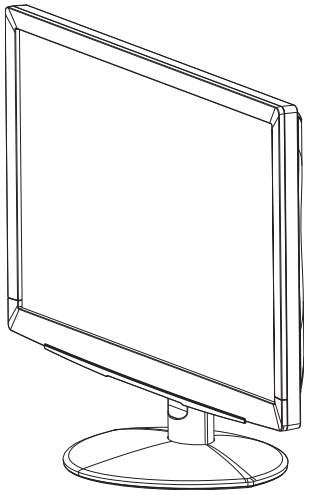
1. Product Features

HP LCD Monitors

The HP LCD (liquid crystal display) monitors have an active matrix, thin-film transistor (TFT) screen with the following features:

- Large diagonal display
- Maximum graphics resolution:
  S1922: 1366 x 768 @ 60Hz
  S1922a: 1366 x768 @ 60Hz
  S2022a: 1600 x 900 @ 60Hz

  Plus full-screen support for lower resolutions
- VGA analog signal
- DVI digital signal on select models
- Easy viewing from a sitting or standing position, or while moving from one side of the monitor to the other
- Tilt adjustment
- Removable base
- Built in stereo speakers on select models
- Security lock slot for a locking security cable (security cable sold separately)
- Plug and Play capability, if supported by your computer system
- On-screen display (OSD) adjustments for ease of setup and screen optimization (choose English, Spanish, French, Portuguese, Russian, Simplified Chinese, Traditional Chinese, Korean)
- Power Saver to reduce energy consumption
- HDCP (High Bandwidth Digital Content Protection) on DVI input for select models
- Software and utilities CD, containing the following:
  Drivers
  Documents



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2. Safety and Maintenance Guidelines

Important Safety Information

A power cord is included with the monitor. If another cord is used, use only a power source and connection appropriate for this monitor. For information on the correct power cord set to use with the monitor, refer to the "Connecting the Power Cable" .

⚠ **WARNING!** To reduce the risk of electric shock or damage to the equipment:

- Do not disable the power cord grounding feature. The grounding plug is an important safety feature.
- Plug the power cord in a grounded (earthed) outlet that is easily accessible at all times.
- Disconnect power from the product by unplugging the power cord from the electrical outlet.

For your safety, do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

To reduce the risk of serious injury, read the Safety and Comfort Guide . It describes proper workstation, setup, posture, and health and work habits for computer users, and provides important electrical and mechanical safety information. This guide is located on the Web at http://www.hp.com/ergo and/or on the documentation CD, if one is included with the monitor.

△ **CAUTION:** For the protection of the monitor, as well as the computer, connect all power cords for the computer and its peripheral devices (such as a monitor, printer, scanner) to some form of surge protection device such as a power strip or Uninterruptible Power Supply (UPS). Not all power strips provide surge protection; the power strips must be specifically labeled as having this ability. Use a power strip whose manufacturer offers a Damage Replacement Policy so you can replace the equipment, if surge protection fails.

Use the appropriate and correctly sized furniture designed to properly support your HP LCD monitor.

⚠ **WARNING:** LCD monitors that are inappropriately situated on dressers, book cases, shelves, desks, speakers, chests, or carts may fall over and cause personal injury. Care should be taken to route all cords and cables connected to the LCD monitor so that they can not be pulled, grabbed, or tripped over.

Safety Precautions

- Use only a power source and connection compatible with this monitor, as indicated on the label/back plate of the monitor.
- Be sure the total ampere rating of the products connected to the outlet does not exceed the current rating of the electrical outlet, and the total ampere rating of the products connected to the power cord does not exceed the rating of the power cord. Look on the power label to determine the ampere rating (Amps or A) for each device.
- Install your monitor near a power outlet that you can easily reach. Disconnect the monitor by grasping the plug firmly and pulling it from the outlet. Never disconnect the monitor by pulling the cord.

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- Do not allow anything to rest on the power cord. Do not walk on the cord

Maintenance Guidelines

To enhance the performance and extend the life of the monitor:

- Do not open the monitor cabinet or attempt to service this product yourself. Adjust only those controls that are covered in the operating instructions. If the monitor is not operating properly or has been dropped or damaged, contact an authorized HP dealer, reseller, or service provider.
- Use only a power source and connection appropriate for this monitor, as indicated on the label/back plate of the monitor.
- Be sure the total ampere rating of the products connected to the outlet does not exceed the current rating of the electrical outlet, and the total ampere rating of the products connected to the cord does not exceed the rating of the cord. Look on the power label to determine the ampere rating (AMPS or A) for each device.
- Install the monitor near an outlet that you can easily reach. Disconnect the monitor by grasping the plug firmly and pulling it from the outlet. Never disconnect the monitor by pulling the cord.
- Turn the monitor off when not in use. You can substantially increase the life expectancy of the monitor by using a screen saver program and turning off the monitor when not in use
- Slots and openings in the cabinet are provided for ventilation. These openings must not be blocked or covered. Never push objec ts of any kind into cabinet slots or other openings.
- Do not drop the monitor or place it on an unstable surface.
- Do not allow anything to rest on the power cord. Do not walk on the cord.
- Keep the monitor in a well-ventilated area, away from excessive light, heat or moisture.
- When removing the monitor base, you must lay the monitor face down on a soft area to prevent it from getting scratched, defaced, or broken.

Cleaning the Monitor

1. Turn off the monitor and the computer.
2. Unplug the monitor from the wall outlet or the power brick.
3. Clean the monitor plastics with a clean cloth dampened with water.
4. Clean the monitor screen with an antistatic screen cleaner.

△ **CAUTION:** Do not use benzene, thinner, ammonia, or any other volatile substances to clean the monitor or the screen. These chemicals may damage the cabinet finish as well as the screen.

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3. Setting Up the Monitor

Unpacking the Monitor

1. Unpack the monitor. Make sure all contents are included. Store the packing box.
2. Turn off the computer and other attached devices.
3. Prepare a flat area to assemble the monitor. You may need a flat, soft, protected area for placing the monitor screen-down while preparing it for installation.

Installing the Monitor

You can install the monitor on a desktop or wall-mount it. Place the monitor in a convenient, well-ventilated location near your computer. Connect the monitor cables after you have installed the monitor.

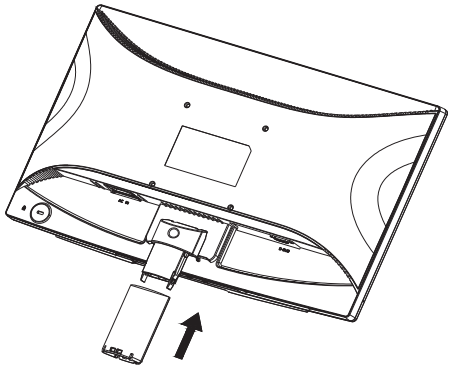
Preparing the monitor for desktop use

1. Set the monitor screen face down on a flat, soft, protected table or desk surface with the support column overhanging the edge.

△ **CAUTION:** The screen is fragile. Avoid touching or applying pressure to the LCD screen; doing so can cause damage.

2. Press the column onto the monitor support column until it locks in place.

Figure 3-1 Attaching the Monitor Column



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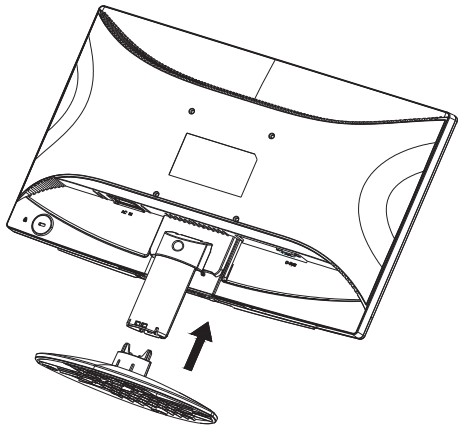
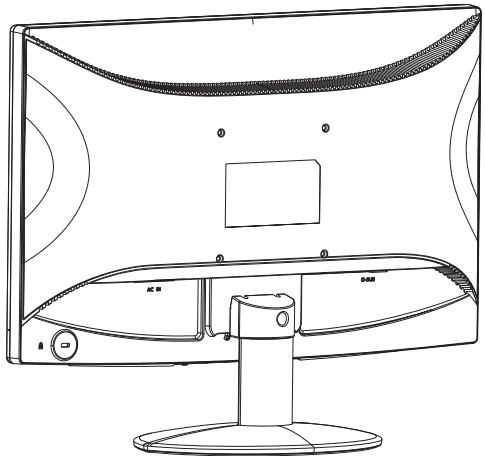
3. Press the base into the column until it locks in position.

Figure 3-2 Attaching the Base



4. Lift the monitor to an upright position and place on a flat, stable surface.

Figure 3-3 Monitor in upright position



Preparing the monitor for wall-mounting

1. Check the stability of the wall-mounting fixture.

⚠ **WARNING!** To reduce the risk of personal injury or of damage to the equipment, check that the wall-mounting fixture is adequately installed and secured before attaching the monitor. Refer to the instructions supplied with the wall-mounting fixture and check that it is capable of supporting the monitor.

2. Disconnect the power cable and any other cables from the monitor.
3. Place the monitor face down on a flat, protected surface.
4. Adjust the stand to a proper angle and remove the screw hidden in the column cover that fasten the base to the monitor.

Figure 3-4 Location of screw securing base to monitor

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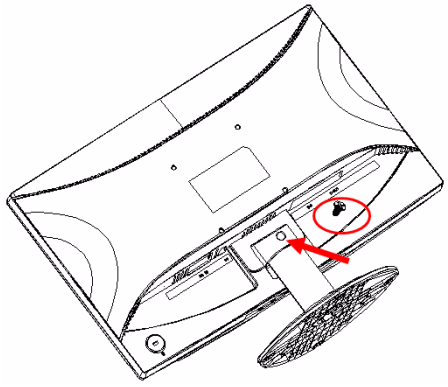
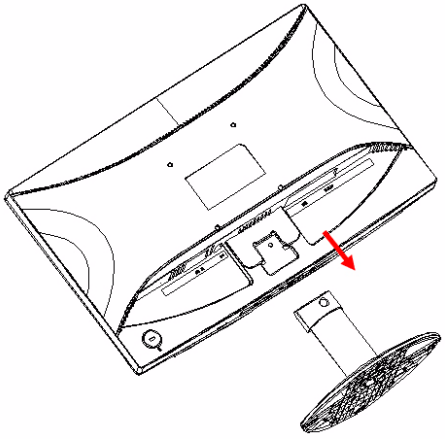


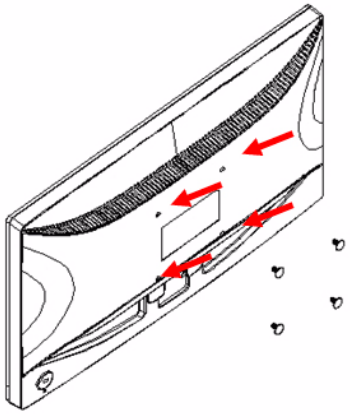
5. Slide the base away from the bottom of the monitor.

Figure 3-5 Sliding the base away from the monitor



6. Remove the screws on the back of monitor.

Figure 3-6 Removing the screws from the back of the monitor



7. Four threaded holes are exposed. These holes are for screws to attach the swing arm or other mounting fixture to the back of the monitor.
8. Follow the instructions included with the mounting fixture to ensure that the monitor is safely attached. The four threaded holes that are on the back of the panel are compliant with the VESA standard for mounting flat-panel monitors.
9. Attach a swing arm or other mounting fixture.

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Connecting Monitor Cables

Connecting the VGA (Analog) Cable or DVI-D (Digital) Cable

Use a VGA video cable or a DVI-D cable to connect your monitor to your computer. To use DVI, you must have a DVI-compliant graphic card. Connectors are located on the back of the monitor. Be sure the computer and monitor are turned off and unplugged.

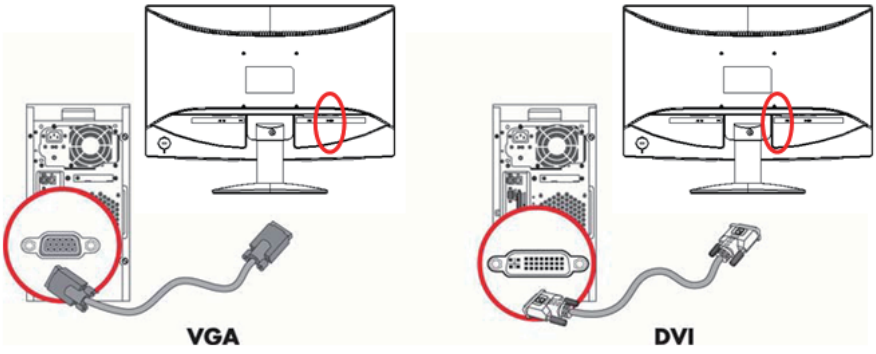
1. To connect the VGA cable

Connect one end of the VGA video cable to the back of the monitor and the other end to the VGA video connector on the computer.

2. To connect the DVI-D cable (provided with select models)

Connect one end of the DVI-D video cable to the back of the monitor and the other end to the DVI-D video connector on the computer. You can use this cable only if your computer has a DVI compliant graphics card installed. The monitor DVI-D connector and cable are included.

Figure 3-7 Connecting the VGA or a DVI-D cable - connector locations may vary

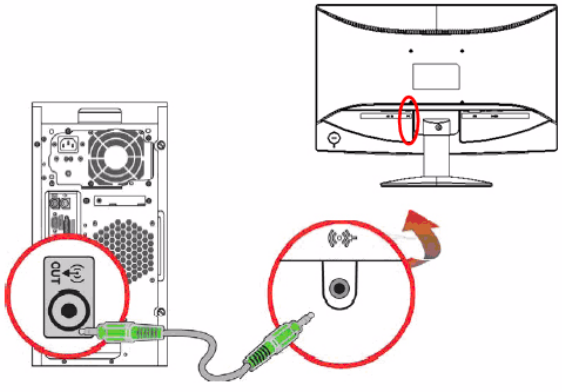


NOTE: When using a VGA or DVI signal, you must connect your audio separately because a VGA or DVI signal converts only video data, not audio data.

Connecting the Audio Cable (Select Models)

Connect the built-in monitor speakers to the computer by using the audio cable as shown in the following illustration

Figure 3-8 connecting the Audio Cables - connector locations may vary



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High-Bandwidth Digital Content Protection (HDCP) (Available on Select Models)

Your monitor supports HDCP and can receive high-definition content. High-definition content is available in many sources, such as Blue-ray Disc devices or HDTV air or cable broadcasts. If you do not have an HDCP-enabled monitor, you will see a blank screen or a lower resolution picture when playing high-definition protected content. Your computer graphics card and monitor must both support HDCP to display protected content.

Connecting the Power Cable

1. Follow all Electrical and Power Warnings

⚠ **WARNING!** To reduce the risk of electric shock or damage to your equipment: Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

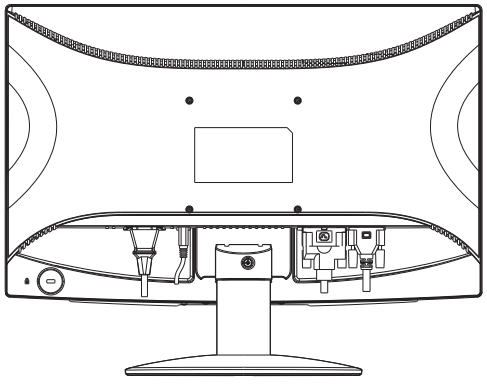
Plug the power cord into a grounded (earthed) electrical outlet.

Be sure that the grounded power outlet you plug the power cord into is easily accessible to the operator and located as close to the equipment as possible. A power cord should be routed so that it is not likely to be walked on or pinched by items that are placed upon it or against it.

Do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable.

See"Technical Specification" (Appendix B) for additional information.

Figure 3-9 Connecting the power cable



2. Connect one end of the power cable to the monitor and the other end to a grounded electrical outlet.

⚠ **WARNING!** To prevent injury from electrical shock, you should do one of the following if a properly grounded electrical outlet is not available: (1) You should use an electrical outlet adapter that provides proper grounding. (2) You should have a properly grounded electrical outlet installed.

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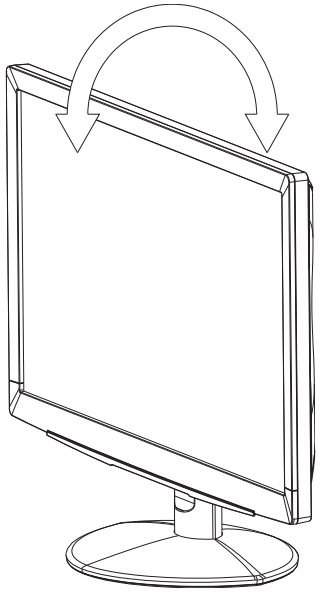
Adjusting the Tilt

For optimal viewing, adjust the screen tilt to your own preference, as follows:

1. Face the front of the monitor and hold the base so that you do not topple the monitor while changing the tilt.
2. Adjust the tilt by moving the top edge of the monitor either toward or away from you, without touching the screen.

Figure 3-10 Tilt adjustment



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4. Operating the Monitor

CD Software and Utilities

The CD that is included with this monitor contains drivers and software that you can install on your computer.

Installing Drivers

If you determine that you need to update the drivers, you can install the monitor driver INF and ICM files from the CD, or download them from the Internet.

Installing the monitor driver software from the CD

To install the monitor driver software from the CD:

1. Insert the CD in your computer CD drive. The CD menu appears.
2. Select the language.
3. Click **Install Monitor Driver Software** .
4. Follow the on-screen instructions.
5. Ensure that the proper resolutions and refresh rates appear in the Display Control Panel settings.

Refer to the Windows® operating system documentation for more information.

NOTE: You might need to install the digitally signed monitor drivers (INF or ICM files) manually from the CD, in case of an installation error. Refer to the "Driver Software Readme" file on the CD for instructions (in English only).

Downloading updated drivers from the Internet

To download the latest version of drivers and software files from the HP Support site:

1. Refer to: **http://www.hp.com/support** .
2. Select your country/region.
3. Select **Download Drivers and Software** .
4. Enter the model number of your monitor. The software download pages for your monitor are displayed.
5. Download and install the driver and software files by following the instructions on the download pages.
6. Ensure that your system meets the requirements.

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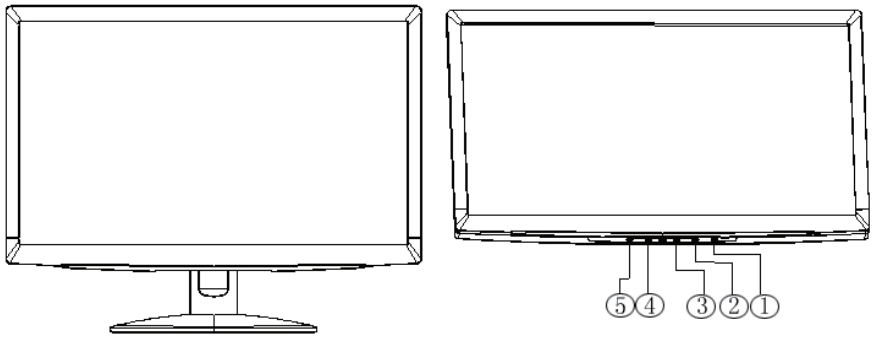
Front-Panel Controls

The monitor buttons are located on the bottom of the front panel

Figure 4-1 Front-panel control buttons



No.	Icon	Description
1	**Power**	Turns the monitor on or puts it in standby or sleep mode. The Power button is located on the bottom or front of the monitor depending on the model.
2	**Menu**	Opens, selects, or exits the OSD menu.
3	**+**	Navigates forward through the OSD menu and increases adjustment levels.
4	**-**	Navigates backward through the OSD menu and decreases adjustment levels.
5	**Auto**	To utilize the auto-adjustment feature,press the key and release it immediately.To use input source selection function,press and hold the key for 3 seconds (multi-source models).

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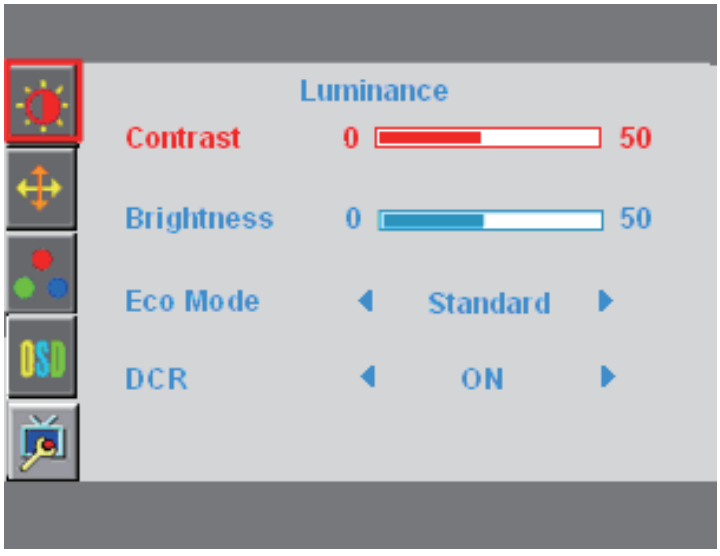
Using the On-Screen Display (OSD)



Main Menu Item	Main Menu Icon	1st Sub Menu Item	2nd Sub Menu Item	Description	Adjust Range	Reset Value
Luminance		Contrast	N/A	Contrast from Digital-register. Each step will increase/ decrease value by 1	0-100	Recall Warm Contrast Value
		Brightness	N/A	Backlight Adjustment Each step will increase/ decrease value by 1	0-100	Recall Warm Brightness Value
		Eco Mode	N/A	Picture Adjustment, Brightness = 90, Contrast = 50. Brightness, Contrast Adjustable	Standard	Recall to Standard Mode
				Brightness = 20, Contrast = 50. Brightness, Contrast Grayed.	Text	
				Brightness = 40, Contrast = 50. Brightness, Contrast Grayed.	Internet	
				Brightness = 60 Contrast = 50, Brightness, Contrast Grayed	Game	
				Brightness = 80, Contrast = 50, Brightness, Contrast Grayed	Movie	
				Brightness = 100, Contrast = 50, Brightness, Contrast Grayed	Sports	
		DCR	N/A	Dynamic contrast ratio	On/Off	Recall Off Value

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Main Menu Item	Main Menu Icon	1st Sub Menu Item	2nd Sub Menu Item	Description	Adjust Range	Reset Value
Image Setup		Clock	N/A	Adjust picture Clock to reduce Vertical-Line noise. Each step will increase/ decrease value by 1	0-100	Do Auto Configure
		Phase	N/A	Adjust Picture Phase to reduce Horizontal-Line noise.	0-100	Do Auto Configure
		H. Position	N/A	Adjust the horizontal position of the picture.	0-100	Do Auto Configure
		V. Position	N/A	Adjust the vertical position of the picture.	0-100	Do Auto Configure
		Image Ratio	N/A	Select Image Aspect Ratio	Wide	Default to panel native aspect ratio

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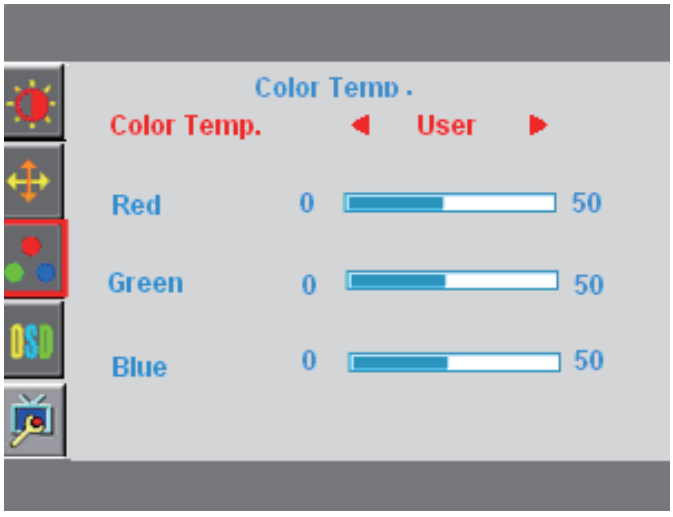

Main Menu Item	Main Menu Icon	Sub Menu Item	Description	Adjust Range	Reset Value
Color Temp.		Warm	Recall Warm Color Temperature.	N/A	The Color Temperature will be set to Warm. The User R/G/B value (default is 50) will can be Modified by Reset function in user mode.
		Normal	Recall Normal Color Temperature.	N/A	
		Cool	Recall Cool Color Temperature.	N/A	
		sRGB (for select models with sRGB function)	Recall sRGB Color Temperature.	N/A	
		Red	Red Gain from Digital-register. Each step will increase/ decrease value by 1	0-100	
		Green	Green Gain from Digital-register. Each step will increase/ decrease value by 1	0-100	
		Blue	Blue Gain from Digital-register. Each step will increase/ decrease value by 1	0-100	

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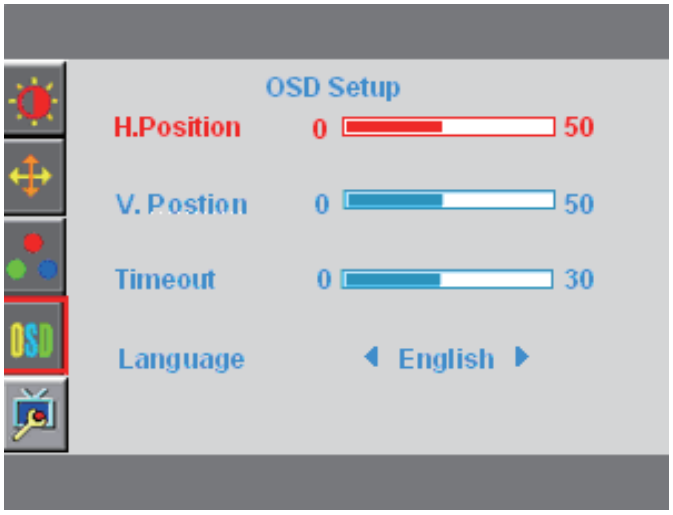

Main Menu Item	Main Menu Icon	Sub Menu Item	Description	Adjust Range	Reset Value
OSD Setup		H. Position	Adjust the horizontal position of the OSD. Each step will increase/ decrease value by 5	0-100	Recall 50 Value
		V. Position	Adjust the vertical position of the OSD. Each step will increase/ decrease value by 5	0-100	Recall 50 Value
		Timeout	Adjust the OSD timeout. Each step will increase/ decrease value by 5	5-100	Recall 10 Value
		Language	Set OSD display language to English. (English is default setting)	English Español Français Português Русский 简体中文 繁體中文 한국어	No need to recall language while press "RESET". If customer have different request, please refer to customer request

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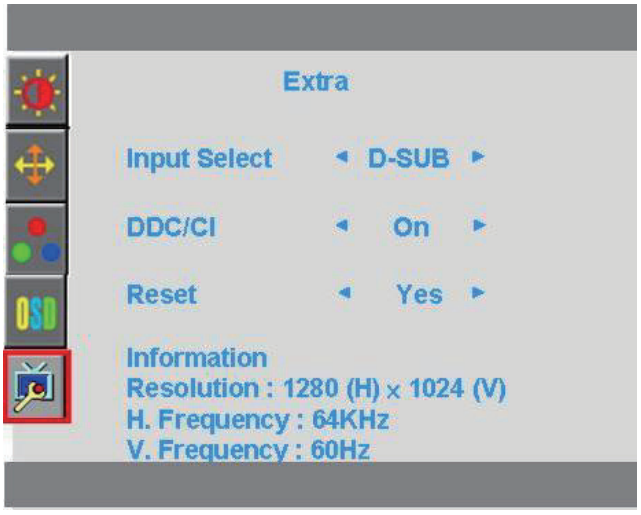

Main Menu Item	Main Menu Icon	Sub Menu Item	Description	Adjust Range	Reset Value
Extra		Input Select (Available on Select Models)	Select video input signal.	D-SUB	Note: Analog-Only Model no "Input Select" item.
				DVI	
		DDC/CI	Select DDC/CI on or off	On	
				Off	
		Reset	Clear each old status of Auto-configuration and set the color temperature to Warm.	Yes	N/A
			Do not execute reset, return to main menu.	No	
		Information	Show the resolution, H/V frequency and input port of current input timing.	N/A	N/A

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Selecting Video Input Connectors

The input connectors are:

- VGA connector (analog)
- DVI-D connector (digital) (Select Models)

The monitor automatically determines which inputs have valid video signals, and displays the image.

You can connect the VGA cable, the DVI-D cable, or both. If both cables are installed, the default input selection is DVI.The source of input can be switched using the Input Select option in the OSD menu.

Identifying Monitor Conditions

Special messages appear on the monitor screen for the following monitor conditions:

Input Signal Out of Range - When the Hsync Frequency, Vsync Frequency or Resolution is out of the monitor support range, will show this message. This message will be flying.

No Signal - When the video cable is not connected, or the video cable is connected but there is no Active signal input, will show this message, after 9 seconds the monitor will enter power saving. This message location is at the position setting in "OSD Setup" item.

Auto Adjustment in Progress - Indicates the auto adjustment function is active. See "Adjusting Screen Quality" in this chapter.

Adjusting Screen Quality

The auto adjustment feature automatically fine-tunes the image quality for display size, position, clock, and phase each time a new video mode is displayed. For more precise adjustments of VGA input, run the Auto Adjustment software on the CD. If you want additional image quality improvement, use the Clock and Phase controls of the monitor to fine tune the image. See "Optimizing Analog Video" in this chapter.

Optimizing Analog Video

Some monitors contain advanced circuitry that allow the monitor to function as a standard analog monitor. Two controls in the OSD menu can be adjusted to improve analog image performance:

Clock - Increase or decrease the value to minimize any vertical bars or stripes visible on the screen background.

Phase - Increase or decrease the value to minimize video distortion or video jitter.

Use these controls only when the auto adjustment function does not provide a satisfactory monitor image in analog mode. To obtain the best results:

1. Allow the monitor to warm up for 30 minutes before adjusting.
2. Access the OSD menu, then select Image Setup.
3. Set the main Clock settings correctly first, because the Phase settings depend on the main Clock settings.When adjusting the Clock and Phase values, if the monitor images become distorted,continue adjusting the values until the distortion disappears. To restore the factory settings, access the OSD menu, select Factory Reset , and then select Yes .

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Power-Saver Feature

When the monitor is in normal operating mode, the Power light is blue and the monitor uses the normal watts of power. For power usage, refer to "Technical Specification" (Appendix B). The monitor also supports a power-saver mode that is controlled by the computer. When the monitor is in the reduced-power state, the monitor screen is blank, the backlight is off, and the Power light is amber. The monitor uses minimum power. When the monitor is "awakened," a brief warm-up period occurs before the monitor returns to normal operating mode. The energy-saving reduced power state activates if the monitor does not detect either the horizontal sync signal or the vertical sync signal. The power-saver feature must be activated on your computer for this feature to work. Refer to your computer documentation for instructions on setting energy-saver features (sometimes called power-management features).

NOTE: The energy-saver feature works only when the monitor is connected to computers that have energy-saver features.

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A. Troubleshooting

Solving Common Problems

The following table lists possible problems, the possible cause of each problem, and the recommended solutions:

Problem Solution

Problem & Question	Possible Solutions
Power LED Is Not ON	• Make sure the power button is ON and the Power Cord is properly connected to a grounded power outlet and to the monitor.
No Plug & Play	• In order for the Plug & Play feature of the monitor to work, you need a Plug & Play compatible computer & video card. Check with your computer manufacturer. Also check the monitor's video cable and make sure none of the pins are bent. • Make sure the HP Monitor Drivers are installed (HP Monitor Drivers are available at : http://www.hp.com/support)
Picture Is Fuzzy & Has Ghosting Shadowing Problem	• Adjust the Contrast and Brightness Controls. • Make sure you are not using an extension cable or switch box. We recommend plugging the monitor directly to the video card output connector on the back of your computer.
Picture Bounces, Flickers Or Wave Pattern Is Present In The Picture	• Move electrical devices that may cause electrical interference as far away from the monitor as possible. • Use the maximum refresh rate your monitor is capable of at the resolution your are using.
Monitor Is Stuck In Active Off-Mode	• The Computer Power Switch should be in the ON position. • The Computer Video Card should be snugly seated in its slot. • Make sure the monitor's video cable is properly connected to the computer. • Inspect the monitor's video cable and make sure none of the pins are bent.
Missing one of the primary colors (RED, GREEN, or BLUE)	• Inspect the monitor's video cable and make sure that none of the pins are bent. • Make sure the monitor's video cable is properly connected to the computer.
Screen image is not centered or sized properly	• Adjust H-Position and V-Position or press hot-key (AUTO).
Picture has color defects (white does not look white)	• Adjust RGB color or select color temperature
Horizontal or vertical disturbances on the screen	• Use Windows shut-down mode. Adjust CLOCK and Phase or press the Auto button to display ideal setting

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Getting Support from hp.com

Before you contact customer service, refer to HP Technical Support at: http://www.hp.com/support

Select your country/region, and then follow the links to the support page for your monitor.

Preparing to Call Technical Support

If you cannot solve a problem by using the troubleshooting tips in this section, you might have to call technical support. For technical support contact information, refer to the printed documentation included with the monitor.

Have the following information available when you call:

- Monitor model number (located on label on back of monitor)
- Monitor serial number (located on label on back of monitor or in the OSD display in the Informationmenu)
- Purchase date on invoice
- Conditions under which the problem occurred
- Error messages received
- Hardware configuration
- Name and version of hardware and software you are using

Locating the Rating Label

The rating label on the monitor provides the product number and serial number. You may need these numbers when contacting HP about your monitor model.

The rating label is on the back of the monitor.

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B. Technical Specifications

All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

HP LCD Monitors

Face treatment: Glare polarizer with hard coating

Input terminal:

VGA connector
DVI-D 24-pin D-type connector (select models)

Table B-1 Model S1922

Specifications:	
Display Type:	TFT LCD active matrix
Viewable Image Size	47 cm (18.5 in.) diagonal
Tilt	-4° (+/-2)~+18° (+/-2)
Maximum Weight (unpacked)	3.2 kg(7.04 lbs)
Dimensions (h x w x d)	340.95 mm x 440.3 mm x 180 mm 13.5 x 17.4 x 7 in
Maximum Graphics Resolution	1366 x 768 @ 60 Hz
Optimum Graphics Resolution	1366 x 768 @ 60 Hz analog mode
Text Mode	720x400
Dot Pitch	0.3 x 0.3 mm/0.01 x 0.01 in
Horizontal Frequency (analog mode)	30 to 83 kHz
Vertical Frequency (analog mode)	55 to 75 Hz
Environmental Requirements	
Temperature (independent of altitude)	
Operating Temperature	41° to 95° F (5° to 35° C)
Non-Operating Temperature	-4° to 140° F (-20° to 60° C)
Relative Humidity (non-condensing)	
Operating Humidity	15% to 90%
Non-Operating Humidity	5% to 90%
Power Source	100-240V~, 50/60 Hz
Power Consumption	37 watts (W)
Sleep Power Consumption	<1.0 watts (W)

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Table B-2 Model S1922a

Specifications:	
Display Type:	TFT LCD active matrix
Viewable Image Size	47 cm (18.5 in.) diagonal
Tilt	-4° (+/-2)~+18° (+/-2)
Maximum Weight (unpacked)	3.2 kg(7.04 lbs)
Dimensions (h x w x d)	340.95 mm x 440.3 mm x 180 mm 13.5 x 17.4 x 7 in
Maximum Graphics Resolution	1366 x 768 @ 60 Hz
Optimum Graphics Resolution	1366 x 768 @ 60 Hz analog mode
Text Mode	720 x 400
Dot Pitch	0.3 x 0.3 mm/0.01 x 0.01 in
Horizontal Frequency (analog mode)	30 to 83 kHz
Vertical Frequency (analog mode)	55 to 75 Hz
Environmental Requirements	
Temperature (independent of altitude)	
Operating Temperature	41° to 95° F (5° to 35° C)
Non-Operating Temperature	-4° to 140° F (-20° to 60° C)
Relative Humidity (non-condensing)	
Operating Humidity	15% to 90%
Non-Operating Humidity	5% to 90%
Power Source	100-240V~, 50/60 Hz
Power Consumption	37 watts (W)
Sleep Power Consumption	<1.0 watts (W)

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Table B-3 Model S2022a

Specifications:	
Display Type:	TFT LCD active matrix
Viewable Image Size	50.8 cm (20 in.) diagonal
Tilt	-4° (+/-2)~+18° (+/-2)
Maximum Weight (unpacked)	3.4 kg(7.48 lbs)
Dimensions (h x w x d)	355.7 mm x 472.8 mm x 180 mm 14 x 18.6 x 7 in
Maximum Graphics Resolution	1600 x 900 @ 60 Hz
Optimum Graphics Resolution	1600 x 900 @ 60 Hz analog mode
Text Mode	720 x 400
Dot Pitch	0.2768 x 0.2768 mm/0.01 x 0.01 in
Horizontal Frequency (analog mode)	30 to 83 kHz
Vertical Frequency (analog mode)	55 to 75 Hz
Environmental Requirements	
Temperature (independent of altitude)	
Operating Temperature	41° to 95° F (5° to 35° C)
Non-Operating Temperature	-4° to 140° F (-20° to 60° C)
Relative Humidity (non-condensing)	
Operating Humidity	15% to 90%
Non-Operating Humidity	5% to 90%
Power Source	100-240V~, 50/60 Hz
Power Consumption	37 watts (W)
Sleep Power Consumption	<1.0 watts (W)

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Preset Video Modes

The monitor automatically recognizes many preset video input modes that will appear properly sized and centered on the screen.

Table B-4 Factory Preset Video Input Modes, S1922/S1922a

Item	Preset Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
1	640 x 480	31.47	59.94
2	720 x 400	31.47	70.09
3	800 x 600	37.88	60.32
4	1024 x 768	48.36	60.00
5	1280 x720	45.00	60.00
6	1280 x 960	60.00	60.00
7	1280 x 1024	63.98	60.02
8	1366 x768	47.71	59.79

Table B-5 Factory Preset Video Input Modes, S2022a

Item	Preset Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
1	640 x 480	31.47	59.94
2	720 x 400	31.47	70.09
3	800 x 600	37.88	60.32
4	1024 x 768	48.36	60.00
5	1280 x720	45.00	60.00
6	1280 x 1024	63.98	60.02
7	1440 x 900	55.93	59.88
8	1600 x 900	55.54	60.00

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LCD Monitor Quality and Pixel Policy

Your LCD Monitor uses high-precision technology, manufactured according to high standards, to help guarantee trouble-free performance. Nevertheless, the display may have cosmetic imperfections that appear as small bright or dark spots. This is common to all LCD displays used in products supplied by all vendors and is not specific to your LCD Monitor. These imperfections are caused by one or more defective pixels or subpixels.

A pixel consists of one red, one green, and one blue subpixel. A defective whole pixel is always turned on (a bright spot on a dark background), or it is always off (a dark spot on a bright background). The first is the more visible of the two. A defective subpixel (dot defect) is less visible than a defective whole pixel, and is small and only visible on a specific background.

To locate defective pixels, the monitor should be viewed under normal operating conditions and in normal operating mode at a supported resolution and refresh rate, from a distance of approximately 50 cm (16 inches). We expect that, over time, the industry will continue to improve its ability to produce displays with fewer cosmetic imperfections, and we will adjust guidelines as improvements are made. For more information about your LCD Monitor, refer to the HP Web site at: http://www.hp.com/support .

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C. Agency Regulatory Notices

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hewlett Packard Company may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

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Declaration of Conformity for Products Marked with the FCC Logo (United States Only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

For questions regarding the product, contact:

Hewlett Packard Company

P. O. Box 692000, Mail Stop 530113

Houston, Texas 77269-2000

Or, call 1-800-HP-INVENT (1-800 474-6836)

For questions regarding this FCC declaration, contact:

Hewlett Packard Company

P. O. Box 692000, Mail Stop 510101

Houston, Texas 77269-2000

Or, call (281) 514-3333

To identify this product, refer to the Part, Series, or Model number found on the product.

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.

German Ergonomics Notice

HP products which bear the "GS" approval mark, when forming part of a system comprising HP brand computers, keyboards and monitors that bear the "GS" approval mark, meet the applicable ergonomic requirements. The installation guides included with the products provide configuration information.

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Japanese Notice

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VCCI-B

Korean Notice

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Power Cord Set Requirements

The monitor power supply is provided with Automatic Line Switching (ALS). This feature allows the monitor to operate on input voltages between 100–120V~ or 200–240V.

The power cord set (flexible cord or wall plug) received with the monitor meets the requirements for use in the country where you purchased the equipment.

If you need to obtain a power cord for a different country, you should purchase a power cord that is approved for use in that country.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the cross-sectional area of the wire must be a minimum of 0.75 mm2 or 18 AWG, and the length of the cord must be between 6 feet (1.8 m) and 12 feet (3.6 m).

If you have questions about the type of power cord to use, contact an authorized HP service provider. A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

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Japanese Power Cord Requirements

For use in Japan, use only the power cord received with this product.

△ **CAUTION:** Do not use the power cord received with this product on any other products.

Product Environmental Notices

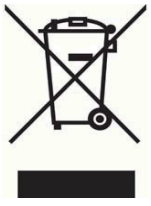
Materials Disposal

This HP product contains mercury in the fluorescent lamp in the display LCD that might require special handling at end-of-life.

Disposal of this material can be regulated because of environmental considerations. For disposal or recycling information, contact the local authorities or the Electronic Industries Alliance (EIA)

http://www.eiae.org .

Disposal of Waste Equipment by Users in Private Household in the European Union



This symbol on the product or on its packaging indicates that this product must not be disposed of with your household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling or waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact the local city office, the household waste disposal service or the shop where you purchased the product.

Chemical Substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and Council). A chemical information report for this product can be found at http://www.hp.com/go/reach .

HP Recycling Program

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, go to http://www.hp.com/recycle .

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Restriction of Hazardous Substances (RoHS)

A Japanese regulatory requirement, defined by specification JIS C 0950, 2005, mandates that manufacturers provide Material Content Declarations for certain categories of electronic products offered for sale after July 1, 2006. To view the JIS C 0950 material declaration for this product, visit http://www.hp.com/go/jisc0950

2008年、日本における製品含有表示方法、JISC0950が公示されました。製造事業者は、2006年7月1日以降に販売される電気・電子機器の特定化学物質の含有につきまして情報提供を義務付けられました。製品の部材表示につきましては、www.hp.com/go/jisc0950を参照してください。

有毒有害物质/元素的名称及含量表

根据中国
《电子信息产品污染控制管理办法》

液晶显示器

部件名称	有毒有害物质和元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
液晶显示器显示面板	X	X	O	O	O	O
机箱/其它	X	O	O	O	O	O

CRT 显示器

部件名称	有毒有害物质和元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
阴极射线管	X	O	O	O	O	O
机箱/其它	X	O	O	O	O	O

O：表示该有毒或有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。

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Turkey EEE Regulation

In Conformity with the EEE Regulation

EEE Yönetmeliğine Uygundur

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